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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/818,263	03/26/2001	Hisanobu Ishiyama	81751.0011	9233

26021 7590 01/23/2003

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EXAMINER

LAO, LUN YI

ART UNIT	PAPER NUMBER
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2673

DATE MAILED: 01/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/818,263

Applicant(s)
Hisanobu Ishiyama

Examiner
Lun-yi Lao

Art Unit
2673



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 6 6) ☐ Other:

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DETAILED ACTION

Drawings

1. Figures 10A-11C should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 7-8 and 16 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

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The specification fails to disclose how the polarity inverting circuit having a shift register for inverting a polarity of a voltage applied to the liquid crystal layer in each row of scanning line since the applicants can not use the same shift register for inverting a polarity of a voltage applied to the opposite electrodes for every frame or for every row of scanning line.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, 6, 9-11, 15 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Iwasaki et al(5,774,099).

As to claims 1, 2, 6, 9-11, 15 and 18, Iwasaki et al teaches a liquid crystal device comprising a plurality of scanning lines(13); a plurality of data lines(14); a plurality of switching elements(26); a plurality of pixel electrodes connected to the plurality of switching elements(26); a plurality of row opposite electrodes(5, 6 or 29) arranged oppositely to the plurality of pixel electrodes through a liquid crystal layer; a scanning line driving circuit(9); a data line driving circuit(1-2, 2-1, 3-1, 3-2) and a polarity inverting circuit(64) for reversing a polarity of a voltage applied to the liquid crystal layer by changing a voltage supplied to an opposite electrode of a row

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corresponding to the selected scanning line in synchronization with the scanning period(see figures 12, 5A, 5C; column 10, lines 13-23; column 11, lines 11-20; column 13, lines 47-68 and column 14, lines 1-51).

As to claims 6 and 15, Iwasaki et al teach the polarity inverting circuit for reversing a polarity of a voltage applied to the liquid crystal layer ever one frame(odd frame and even frame)(see figures 5A and 5C).

6. Claims 1, 2, 6-11 and 15-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Ishizaki et al(EP 0,558,059)

As to claims 1, 2, 6-11 and 15-18, Ishizaki et al teach a liquid crystal device comprising a plurality of scanning lines; a plurality of data lines; a plurality of switching elements(104); a plurality of pixel electrodes connected to the plurality of switching elements; a plurality of row opposite electrodes arranged oppositely to the plurality of pixel electrodes through a liquid crystal layer; a scanning line driving circuit(101); a data line driving circuit(102) and a polarity inverting circuit(103, 111) for reversing a polarity of a voltage applied to the liquid crystal layer by changing a voltage supplied to an opposite electrode of a row corresponding to the selected scanning line in synchronization with the scanning period(see figures 1-5; column 4, lines 16- 58; column 5, lines 1-58 and column 6, lines 1-2).

As to claims 6, 7 and 15-16, Ishizaki et al teach the polarity inverting circuit for reversing a polarity of a voltage applied to the liquid crystal layer ever one frame or every scanning line(see figures 2-5 and column 5, lines 45-58 and column 6, lines 1-2).

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As to claims 8 and 17, Ishizaki et al teach M rows of opposite electrodes are insulated from each other(see figures 1 and 4).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 3-5 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishizaki et al (EP 0,558,059) in view of Hosokawa et al(4,394,380).

As to claims 3-5 and 12-14, Ishizaki et al teach a polarity inverting circuit(103, 111) comprising a shift register for shift a clock signal(see figures 1, 4 and column 4, lines 16-21). Ishizaki et al fail to disclose the polarity inverting circuit having a shift register for shift electric potential for applying to the row of opposite electrodes.

Hosokawa et al teach an LCD display having a common driver(34) having a shift register for performing a memory function(see figures 4, 7-9; column 7, lines 35-68 and column 8, lines 1-

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8). It would have been obvious to have modified Ishizaki et al with the teaching of Hosokawa et al, so as to simplify the driving circuit.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Takabatake et al(5,430,460) teach an LCD display for inverting polarity signals applied to common electrodes.

Kim(5,923,310) teach an LCD display for inverting polarity signals applied to common electrodes(see figures 14F and 16C).

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lun-yi, Lao whose telephone number is (703) 305-4873.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala, can be reached at (703) 305-4938.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Application/Control Number: 09/818,263

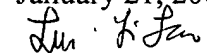
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Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

January 21, 2003



Lun-yi Lao

Primary Examiner